DESCRIPTION

The Fail-Safe Harmony VR Linear Series provides exceptional aesthetics with remarkable strength. A wide variety of lamp options and connection configurations offer unmatched versatility for a wide range of applications. Die-Cast end caps, heavy extruded aluminum body provides strength and rigidity for complex environments while an extruded prismatic polycarbonate lens obscures the lamp image and spreads light evenly.

APPLICATION

The Harmony VR Linear Series is ideal for areas where the need for aesthetics and protection from vandalism are critical. Perfect for schools, hospitals, corridors, dormitories, public restrooms, common areas, and transit stations.

Catalog #	Type
Project	
Comments	
Prepared by	Date

HVL
CONTINUOUS 8″ LINEAR

HARMONY VR

14W – 108W

Fluorescent

POLYCARBONATE LINEAR FLUORESCENT LUMINAIRE
Clear Prismatic or Opal

Architectural Vandal Resistant Luminaire

HARMONY™ Vandal Resistant

ARCHITECTURAL Vandal Resistant

SPECIFICATION FEATURES

A···Housing
Heavy duty extruded aluminum rails and die-cast end caps provide rigid construction. Smooth end caps provided with internal 7/8" knockouts. Finished in white standard. Optional architectural colors available.

B···Lens
One piece extruded UV stabilized polycarbonate. Unique prismatic design provides even light distribution while obscuring lamp image and direct glare. Internal prisms reduce dirt build-up and make cleaning easier.

C···Fastners
Stainless steel TORX® with center reject pin and allen head set screws provided. Screw heads are side mounted and concealed under lens.

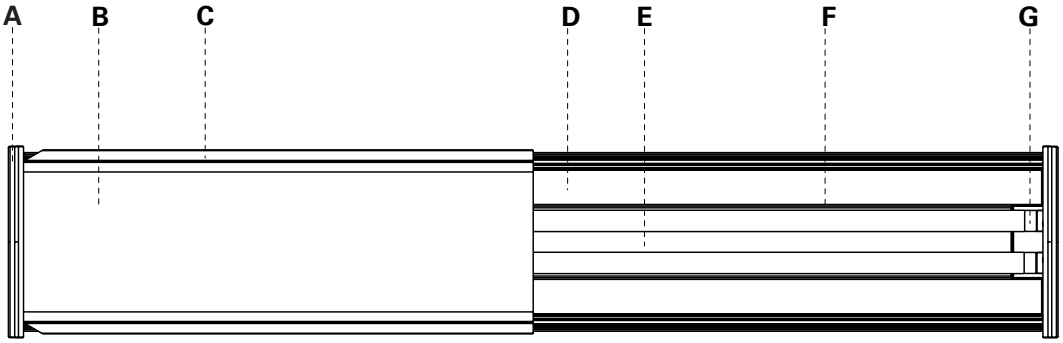
D···Reflector
20 ga. CRS with white high reflectance polyester powder coat finish. Reflector serves as ballast and wireway cover.

E···Lamps
(By others)

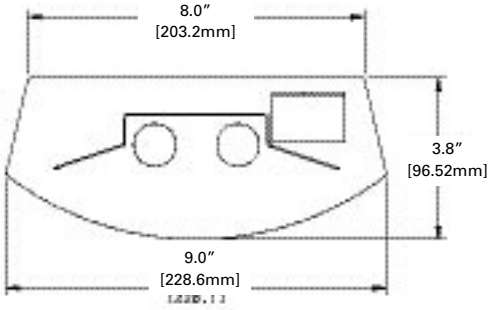
F···Ballast
Ballasts are CBM/ETL Class "P" and positively secured to housing.

G···Socket
Pressure lock lampholders.

Listings
UL Listed and CSA Certified Wet Location for covered ceiling surface mount. Damp location standard for all other mountings.



END DIMENSIONS



ENERGY DATA

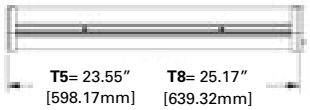
For Energy Management related technical data to support the performance of this fixture series, refer to the ordering information for input wattage.

TORX® is a registered trademark of Camcar Division of Textron Inc.

SIDE DIMENSIONS

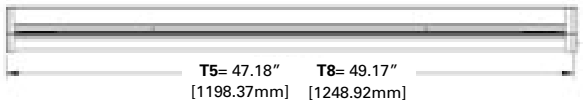
SMOOTH END CAPS

2' BEGINNING AND END UNITS



T5= 23.55″ [598.17mm] **T8**= 25.17″ [639.32mm]

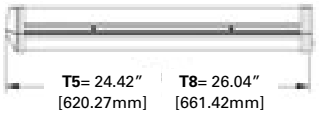
4' BEGINNING AND END UNITS



T5= 47.18″ [1198.37mm] **T8**= 49.17″ [1248.92mm]

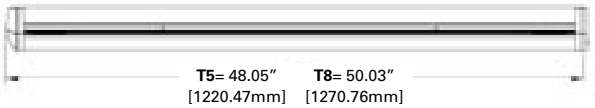
DECORATIVE END CAPS

2' BEGINNING AND END UNITS



T5= 24.42″ [620.27mm] **T8**= 26.04″ [661.42mm]

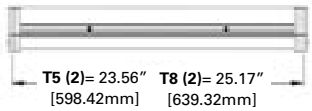
4' BEGINNING AND END UNITS



T5= 48.05″ [1220.47mm] **T8**= 50.03″ [1270.76mm]

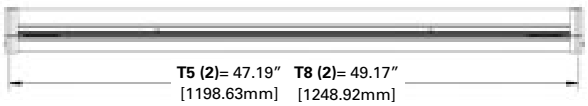
JOINER BANDS

2' MIDDLE UNITS



T5 (2)= 23.56″ [598.42mm] **T8 (2)**= 25.17″ [639.32mm]

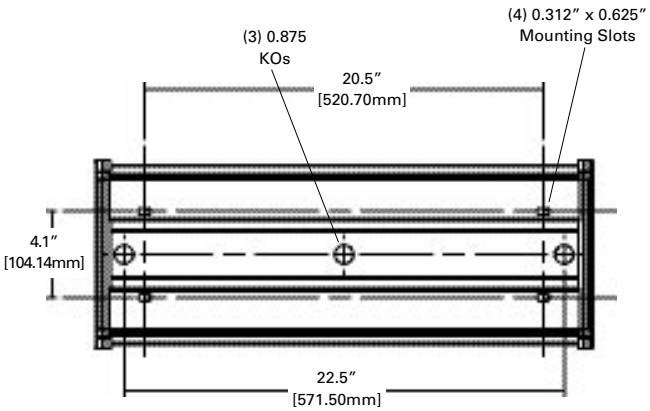
4' MIDDLE UNITS



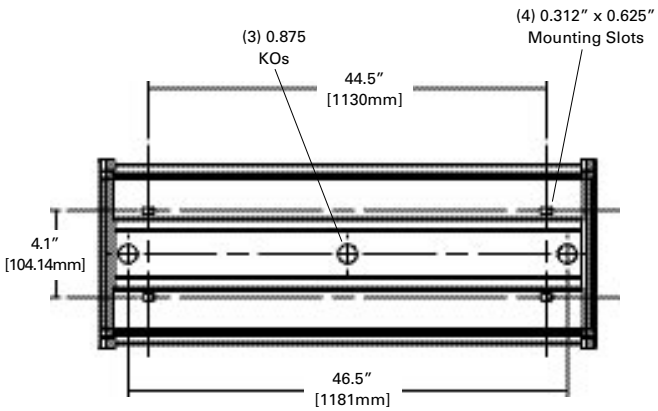
T5 (2)= 47.19″ [1198.63mm] **T8 (2)**= 49.17″ [1248.92mm]

MOUNTING DIMENSIONS

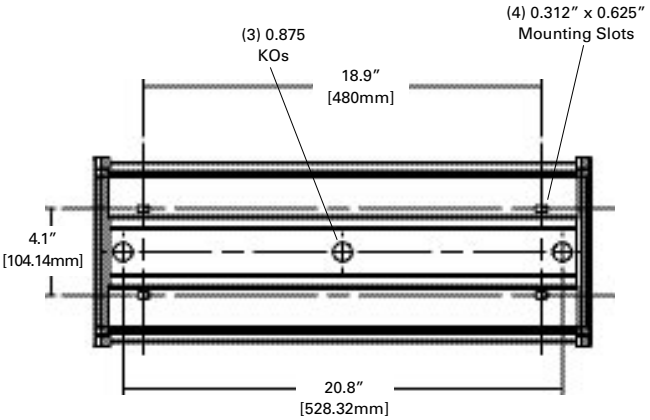
2′ T8 FIXTURE



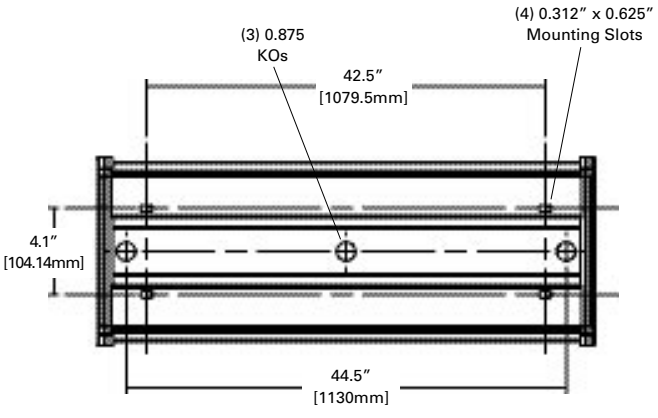
4′ T8 FIXTURE



2′ T5 FIXTURE



4′ T5 FIXTURE



ORDERING INFORMATION

SAMPLE NUMBER: HVL8BR-332-120V-O-EB82-D-SRW

Product Family	Row/Node Configuration	Lamp Type	Voltage	Lens Type	Ballast	End Caps	Options	Finish	Accessories (Order Separately)

HVL8=Harmony VR Linear 8" Width

BR=Beginning
MR=Middle
ER=End

LAMP TYPE
2' Length

114=(1) 14W T5 Lamp
214=(2) 14W T5 Lamps
124=(1) 24W T5HO Lamp
224=(2) 24W T5HO Lamps
117=(1) 17W T8 Lamp
217=(2) 17W T8 Lamps

4' Length

128=(1) 28W T5 Lamp
228=(2) 28W T5 Lamps
154=(1) 54W T5HO Lamp
254=(2) 54W T5HO Lamps
132=(1) 32W T8 Lamp
232=(2) 32W T8 Lamps

VOLTAGE
120=120V
277=277V
347=347V
UNV=120-277V
UNC=347-480V

LENS TYPE
C=Clear Prismatic
O=Opal

Electronic Ballast
EB81=(1) Ballast for use with T8 lamp
EB82=(2) Ballasts for use with T8 lamps
EB51=(1) Ballast for use with T5 lamp
EB52=(2) Ballasts for use with T5 lamp

BLANK=No End Caps (Middle Units)
D=Decorative End Caps
S=Smooth End Caps

EBP=Emergency Battery Pack [1]
FNL=Fluorescent Night Light
PM=Pendant Mount [2]
GLR=Fuse and Holder
PI/CPI=Plug-In (1,2, or 3)
TILW=Tandem Inline Wiring
SRW=Single Raceway
DRW=Dual Raceway (2 Lamp Max)
UPL=Uplight
NSF=Certified NSF Rating for Food Industry

Blank=Architectural White
BK=Architectural Black
DP=Dark Platinum

VRSD=TORX® Screwdriver
VRSB=TORX® Screwdriver Bit

Notes:

For additional options, consult your Cooper Lighting Representative.
Specifications and dimensions subject to change without notice.
1 Must specify voltage.
2 Stems must be ordered separately.

Lifetime Warranty

Fail-Safe will repair or provide a replacement fixture for any VR architectural luminaire found to be inoperative due to physical abuse for the duration of the installation**. This includes all VR polycarbonate lens luminaires. This warranty is only valid relative to proper installation of the luminaire, using the four-point mounting method for all luminaires.

Furthermore, Fail-Safe cannot warranty product against some forms of anti-social human behavior involving corrosive chemicals, fire, paint or gunfire. Yellowed lenses from ultraviolet radiation/heat are excluded from this warranty.

** To make a claim, contact your Cooper Lighting Agent to arrange a RMA (Return Material Authorization) for the claimed product. Upon receipt and verification of the defect, Cooper Lighting will return to you a repaired or, at Cooper Lighting's sole option, replacement fixture.

ORDERING AND SPECIFICATION EXAMPLE

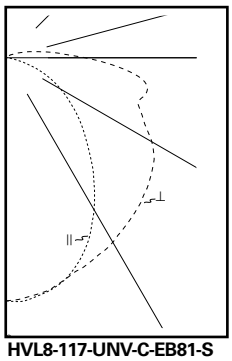
24' Continuous Row Mount

Luminaires (End caps installed on beginning and end of run)
Beginning:
(1) HVL8BR-232-277V-C-EB82-D
Middle:
(4) HVL8MR-232-277V-C-EB82
End:
(1) HVL8ER-232-277V-C-EB82-D
Connectors:
(5) HVL8CB (Connector Bands)

4' Square Formation

Luminaires (Does not require end caps)
(4) HVL8MR-232-277V-C-EB81
Connectors
(4) HVL8-2W (2 Way Connectors)

PHOTOMETRICS



HVL8-117-UNV-C-EB81-S
Electronic Ballast

(1) F17T8/TL841 Lamp 1300 Lumens

Spacing criterion: (II) 1.1 x mounting height, (⊥) 1.3 x mounting height

Efficiency 68.9%

Test Report 242p108

Yearly Cost of 1000 lumens, 3000 hrs at .08 KWH = $3.04

Coefficients of Utilization

Effective floor cavity reflectance																				
	20%																			
rc	80%				70%				50%			30%			10%			0%		
rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0		
RCR																				
0	81	81	81	81	79	79	79	79	75	75	75	71	71	71	67	67	67	65		
1	72	68	64	61	70	66	63	60	62	60	57	59	57	55	56	54	52	51		
2	65	58	53	48	63	57	52	47	54	49	46	51	47	44	48	45	43	41		
3	59	51	44	39	57	49	44	39	47	42	38	44	40	37	42	38	35	34		
4	54	45	38	33	52	43	37	33	41	36	32	39	35	31	37	33	30	28		
5	49	40	33	28	47	39	33	28	37	31	27	35	30	27	33	29	26	24		
6	45	36	29	24	44	35	29	24	33	28	24	32	27	23	30	26	23	21		
7	42	32	26	21	41	32	26	21	30	25	21	29	24	20	28	23	20	19		
8	39	29	23	19	38	29	23	19	28	22	19	26	22	18	25	21	18	16		
9	37	27	21	17	35	26	21	17	25	20	17	24	20	16	23	19	16	15		
10	34	25	19	15	33	24	19	15	23	18	15	23	18	15	22	18	15	13		

Zonal Lumen Summary

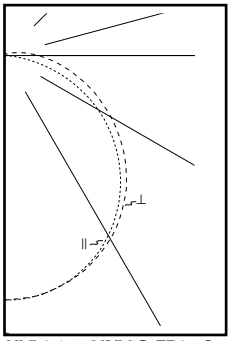
Zone	Lumens	%Lamp	%Fixture
0-30	196	15.0	21.8
0-40	319	24.6	35.7
0-60	581	44.7	64.8
0-90	850	65.4	94.9
90-180	46	3.5	5.1
0-180	896	68.9	100.0

Typical VCP Percentages

	Height Along		Height Across	
Room Size (Ft.)	8.5′	10.0′	8.5′	10.0′
20 x 20	69	77	48	59
30 x 30	61	66	36	45
30 x 60	62	66	25	29
60 x 30	54	60	42	50
60 x 60	53	56	28	32

Candela

Angle	Along II	45°	Across⊥
0	259	259	259
10	253	251	252
20	229	233	238
30	187	213	227
40	140	190	214
50	101	163	200
60	67	136	179
70	35	103	150
80	7	80	150
90	0	35	82
100	0	13	37
110	0	6	16
120	0	3	7
130	0	1	3
140	0	0	2
150	1	0	0
160	1	1	0
170	1	1	1
180	1	1	1



HVL8-217-UNV-O-EB81-S
Electronic Ballast

(2) F17T8/TL841 Lamp 1300 Lumens ea.

Spacing criterion: (II) 1.3 x mounting height, (⊥) 1.3 x mounting height

Efficiency 49.6%

Test Report 242p105

Yearly Cost of 1000 lumens, 3000 hrs at .08 KWH = $3.04

Coefficients of Utilization

Effective floor cavity reflectance																				
	20%																			
rc	80%				70%				50%			30%			10%			0%		
rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0		
RCR																				
0	59	59	59	59	57	57	57	57	54	54	54	52	52	52	49	49	49	48		
1	53	50	48	46	51	49	47	45	47	45	43	44	43	42	42	41	40	39		
2	48	44	40	37	46	43	39	36	40	38	35	39	36	34	37	35	33	32		
3	44	38	34	30	42	37	33	30	35	32	29	34	31	29	32	30	28	27		
4	40	34	29	26	39	33	29	25	31	28	25	30	27	24	29	26	24	23		
5	37	30	25	22	35	29	25	22	28	24	21	27	24	21	26	23	21	20		
6	34	27	22	19	33	26	22	19	25	22	19	24	21	18	23	20	18	17		
7	31	24	20	17	30	24	20	17	23	19	16	22	19	16	21	18	16	15		
8	29	22	18	15	28	22	18	15	21	17	15	20	17	15	20	17	14	13		
9	27	20	16	13	26	20	16	13	19	16	13	19	15	13	18	15	13	12		
10	25	19	15	12	25	18	15	12	18	14	12	17	14	12	17	14	12	11		

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30	317	12.2	24.6
0-40	522	20.1	40.4
0-60	935	35.9	72.4
0-90	1250	48.1	96.8
90-180	41	1.6	3.2
0-180	1291	49.6	100.0

Typical VCP Percentages

	Height Along		Height Across	
Room Size (Ft.)	8.5′	10.0′	8.5′	10.0′
20 x 20	53	61	48	57
30 x 30	47	51	41	46
30 x 60	43	46	33	37
60 x 30	49	52	45	49
60 x 60	43	45	36	38

Candela

Angle	Along II	45°	Across⊥
0	405	405	405
10	399	399	399
20	378	379	381
30	344	347	351
40	298	304	310
50	242	251	260
60	179	190	204
70	109	128	148
80	40	73	97
90	0	34	56
100	0	12	28
110	0	4	12
120	0	3	6
130	0	2	4
140	1	1	2
150	1	1	2
160	1	1	1
170	2	2	2
180	2	2	2

NOTES: See option/accessories or technical sections for additional detailed product data. Specifications and Dimensions subject to change without notice.